New

U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: INSTALLATION, REMOVAL, OR CHANGE OF IDENTIFICATION DATA AND IDENTIFICATION PLATES ON AIRCRAFT ENGINES

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Change:

1. PURPOSE. This advisory circular (AC) provides information and guidance concerning the installation, removal, or change of identification data and identification plates on aircraft engines. This AC identifies an acceptable means, but not the only means, of compliance with Federal Aviation Regulations Part 45.

2. RELATED FEDERAL AVIATION REGULATIONS (FAR) SECTIONS. Sections 43.3, 43.9, 43.11, 45.11, and 45.13.

3. BACKGROUND. FAR Section 45.11 sets forth the requirements for each aircraft engine manufactured under a type or production certificate to be identified by means of a fireproof identification (ID) plate. FAR Section 45.13 requires specific identification information on the ID plate. The identification inform&on includes the name of the builder, the model designation, the builder's serial number, the type certificate number (if any), production certificate number (if any), and the established rating. The Federal Aviation Administration (FAA) requires the use of identification plates and the data contained thereon to identify the specific FAA approved engine configuration and the fact that it was manufactured and approved under the provisions of an FAA production approval. Additionally, the regulations require that the identification plate be affixed to the engine at an accessible location, and in such a manner that it will not likely be defaced or removed during normal service, or lost or destroyed in a haccident.

4. DISCUSSION.

a. Problems have arisen, since the advent of the turbine engine modular concept, with respect to engine identificatim. A significant feature of turbine engines is that separate sections (known as modules) are devoted to particular functions. A typical engine consists of a compressor section, canbustion section, turbine section, and exhaust section. These modules are not independently approved by the FAA, but are approved as a part of the complete engine type design.

b. Aircraft engine manufacturers in compliance with FAR Sections 45.11 and 45.13 identify each complete engine by affixing an engine ID plate to one of the Imdules. That engine ID plate does not identify the nodule but does serve to identify the assembly of modules that make up the complete engine approved under a type certificate. That nodule therefore serves only as a vehicle on which to affix the engine ID plate.

c. When the module to which the engine ID plate is affixed requires replacement, the ID plate would need to be removed and reinstalled on the replacement module in order to mintain the identification of the engine. This is analogous to ah aircraft, when the member to which the aircraft ID plate is affixed is damaged, the ID plate would be removed fran the damaged member and reinstalled on the replacement member since that ID plate serves to identify the aircraft, hot the member to which it is affixed.

d. Maintenance on modular engines is normally accomplished by replacing entire modules. However, there is a need to mintain a continuous history on the basic engine (notwithstanding that every module may have been replaced any number of times) which is predicated on the engine ID plate, serial number, and historical/modification records. Additionally, modular type engines also contain a number of non-modular components (e.g., fuel lines, accessories, etc.) which are controlled by the engine serial number on the ID plate and corresponding historical/modification records.

e. The FAA is aware that sane aircraft operators/repair stations do not remove the engine ID plate fran the module to which it is affixed when the particular module is: (1) DAMAGED AND MUST BE REPLACED; and, (2) REMOVED FOR MAINTENANCE AND WILL NOT BE REINSTALLED ON THE ENGINE FROM WHICH IT WAS REMOVED. Similarly, they install replacement modules on which an engine ID plate (belonging to another engine assembly) is affixed. This essentially constitutes an exchange of ID plates resulting in a loss of identity (historical/ modification data) for both engines, as well as being in noncompliance with FAR Section 45.13(c) and/or (e). The changing of engine ID plates, including serial numbers from engine to engine, or failure to remove and reinstall engine ID plates when themdule to which they are attached is required to be removed for maintenance, inhibits positive control of both modular and non-modular components. This control is needed, since the engine ID plate and the information contained thereon provides positive correlation between the engine and the required historical/modification records. The engine ID plate also serves as a baseline to control all activity accomplished on a particular engine (i.e., configuration, AD compliance, overhaul, life limited parts, noise/mission, mdule changes, compliance, etc.) throughout the entire service life of the engine.

5. GENERAL INFORMATION.

a. Except as otherwise provided for in FAR 45.13(d) no person my remove, change, or place the identification information (required by FAR 45.13(a)) on an engine ID plate, or remove or install any engine ID plate (required by FAR 45.11) without the approval of the Administrator.

b. FAR 45.13(b) prohibits the unauthorized removal, change, or placement of identification inform&ion required by FAR 45.13(a) on any aircraft engine. However, FAR 45.13(d)(1) authorizes removal, change, or replacement of the identification information required by FAR 45.13(a) oh any engine but only when it is necessary and accomplished by persons performing work under the provisions of FAR Part 43. The change of identificatcm information would be considered necessary when accomplished in compliance with specific maintenance procedures contained in manufacturer's manuals, letters, or bulletins including those that are incorporated in and made a part of an airworthiness directive.

c. FAR 45.13(c) provides an exception, whereby persons performing maintenance under the provisions of FAR Part 43, maintenance, preventive maintenance, rebuilding, and alteration, my remove the identification plate required by FAR Section 45.11 when necessary during maintenance operations.

(1) Removal of an ID plate would be considered necessary during certain maintenance operations such as caustic cleaning, paint removal, or sandblasting. Removal of ah ID platewouldalsobe considered necessary when the structure to which the ID plate is fastened has to be repaired or replaced for maintenance purposes.

(2) An engine ID plate removed during maintenance operations must be reinstalled on the same engine in the original location from which it was removed prior to releasing the engine to service.

(3) Ah engine ID plate cannot be replaced by persons performing maintenance under the provisions of FAR 43 without the approval of the Administrator.

d. The engine ID plate, when permanently affixed, serves at all times as the control for establishing and maintaining the engine approval status. Accordingly, the identification plate installed by the engine manufacturer must remain with the particular engine throughout its useful life unless otherwise authorized by the Administrator.

6. PROCEDURE. When the module to which the engine ID plate is affixed is removed fran ah engine, and it is to be replaced with another module that is new, or that has been repaired or overhauled, the engine ID plate shall be transferred from the module that was removed to the module installed in its place. Upon completion of the nodule and engine ID plate change, ah entry must be made in the maintenance record as required by FAR Sections 43.9 and 43.11.

7. OTHER METHODS. It should be recognized thatmthods other than those describedinthis AC may be implemented when they are found acceptable to the Administrator.

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